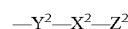


- $C(O)-$ ,  $-N(R^{A3})-C(O)O-$ ,  $-C(O)-N(R^{A3})-$ ,  $-N(R^{A3})C(O)N(R^{A3})-$ ,  $-S-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-S(O)_2N(R^{A3})-$ , or  $-N(R^{A3})SO_2-$  wherein  $R^{A3}$  is selected from hydrogen or (1-2C)alkyl; and  
 Z is hydrogen, (1-6C)alkyl, (2-6C)alkenyl, (2-6C)alkynyl, aryl, (3-6C)cycloalkyl, (3-6C)cycloalkenyl, heteroaryl or heterocyclyl;  
 and wherein Z is optionally further substituted by one or more substituent groups independently selected from oxo, halo, cyano, nitro, hydroxy, carboxy,  $NR^{A6}R^{A7}$ ,  $-(CR^{A4}R^{A5})_p-NR^{A6}R^{A7}$  (wherein p is selected from 1, 2 or 3), (1-4C)alkoxy, (1-4C)alkyl, (3-8C)cycloalkyl, (3-8C)cycloalkyl-(1-3C)alkyl, (1-4C)alkanoyl, (1-4C)alkylsulphonyl, aryl, aryloxy, heterocyclyl, heterocycliloxy, heterocyclyl-(1-2C)alkyl, heteroaryl, heteroaryloxy, heteroaryl-(1-2C)alkyl,  $C(O)NR^{A6}R^{A7}$ ,  $NR^{A4}C(O)R^{A5}NR^{A4}S(O)_2R^{A5}$  and  $S(O)_2NR^{A4}R^{A5}$ ; wherein  $R^{A4}$  and  $R^{A5}$  are each independently selected from hydrogen or (1-4C)alkyl; and wherein  $R^{A6}$  and  $R^{A7}$  are each independently selected from hydrogen, (1-4C)alkyl, (1-4C)alkylamino, (3-6C)cycloalkyl or (3-6C)cycloalkyl-(1-2C)alkyl; or  $R^{A6}$  and  $R^{A7}$  can be linked such that, together with the nitrogen atom to which they are attached, they form a 4-6 membered heterocyclic ring;  
 and wherein any alkyl, aryl, heterocyclyl or heteroaryl group present in a substituent group on Z is optionally further substituted by halo, cyano, nitro, hydroxy, caboxy, amino, (1-2C)alkoxy, or (1-2C)alkyl;  
 $R_2$  is a substituent group selected from hydrogen, halo, cyano, nitro, hydroxy or  $R_2$  is selected from:  
 (i)  $-C(O)OR_{2A}$ , wherein  $R_{2A}$  is selected from hydrogen, (1-6C)alkyl, (3-8C)cycloalkyl, (3-8C)cycloalkyl-(1-2C)alkyl, aryl, aryl-(1-2C)alkyl, heteroaryl, heteroaryl-(1-2C)alkyl, heterocyclyl or heterocyclyl-(1-2C)alkyl, each of which is optionally substituted by one or more substituent groups selected from oxo, halo, cyano, nitro, hydroxy, carboxy, amino, (1-4C)alkoxy, (1-4C)alkyl, or (1-4C)alkanoyl;  
 (ii)  $-C(O)NR_{2B}R_{2C}$ ; wherein  $R_{2B}$  and  $R_{2C}$  are each independently selected from hydrogen, (1-6C)alkyl, (3-8C)cycloalkyl, (3-8C)cycloalkyl-(1-2C)alkyl, aryl, aryl-(1-2C)alkyl, heteroaryl, heteroaryl-(1-2C)alkyl, heterocyclyl or heterocyclyl-(1-2C)alkyl, each of which is optionally substituted by one or more substituent selected from oxo, halo, cyano, nitro, hydroxy, carboxy, amino, (1-4C)alkoxy, (1-4C)alkyl, or (1-4C)alkanoyl;  
 (iii)  $-C(O)NR_{2D}NR_{2B}R_{2C}$ ; wherein  $R_{2D}$  is selected from hydrogen or (1-6C)alkyl and  $R_{2B}$  and  $R_{2C}$  are as defined above;  
 (iv) tetrazolyl;  
 (v) triazolyl;  
 (vi)  $-B(OR_{2F})(OR_{2G})$ , wherein  $R_{2F}$  and  $R_{2G}$  are each independently selected from hydrogen, (1-6C)alkyl or  $R_{2F}$  and  $R_{2G}$  are linked such that, together with the B and O atoms, they form a 5 or 6-membered heterocyclic ring, which is optionally substituted by (1-2C)alkyl; or  
 (vii) trifluoromethylketone;

$R_3$  is absent or a substituent group selected from halo, cyano, nitro, hydroxy or a group of the formula:



wherein

$Y^2$  is absent or a linker group of the formula  $[CR^{C1}R^{C2}]_n$  in which n is an integer selected from 1 or 2, and  $R^{C1}$  and  $R^{C2}$  are each independently selected from hydrogen or (1-2C)alkyl;

$X^2$  is absent or  $-O-$ ,  $-C(O)-$ ,  $-C(O)O-$ ,  $-OC(O)-$ ,  $-CH(OR^{C3})-$ ,  $-N(R^{C3})-$ ,  $-N(R^{C3})-C(O)-$ ,  $-N(R^{C3})-C(O)O-$ ,  $-C(O)-N(R^{C3})-$ ,  $-N(R^{C3})C(O)N(R^{C3})-$ ,  $-S-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-S(O)_2N(R^{C3})-$ , or  $-N(R^{C3})SO_2-$  wherein  $R^{C3}$  is selected from hydrogen or (1-2C)alkyl; and

$Z^2$  is hydrogen, (1-6C)alkyl, (2-6C)alkenyl, (2-6C)alkynyl, aryl, (3-6C)cycloalkyl, (3-6C)cycloalkenyl, heteroaryl or heterocyclyl;

and wherein  $Z^2$  is optionally further substituted by one or more substituent groups independently selected from oxo, halo, cyano, nitro, hydroxy, carboxy,  $NR^{C4}R^{C5}$ , (1-4C)alkoxy, (1-4C)alkyl, (3-8C)cycloalkyl, (3-8C)cycloalkyl-(1-3C)alkyl, (1-4C)alkanoyl, (1-4C)alkylsulphonyl, aryl, aryloxy, heterocyclyl, heterocycliloxy, heterocyclyl-(1-2C)alkyl, heteroaryl, heteroaryloxy, heteroaryl-(1-2C)alkyl,  $C(O)NR^{C4}R^{C5}$ ,  $NR^{C4}C(O)R^{C5}$ ,  $NR^{C4}S(O)_2R^{C5}$  and  $S(O)_2NR^{C4}R^{C5}$ ; wherein  $R^{C4}$  and  $R^{C5}$  are each independently selected from hydrogen, (1-4C)alkyl or (3-6C)cycloalkyl or (3-6C)cycloalkyl-(1-2C)alkyl; or  $R^{C4}$  and  $R^{C5}$  can be linked such that, together with the nitrogen atom to which they are attached, they form a 4-6 membered heterocyclic ring;

and wherein any alkyl, aryl, heterocyclyl or heteroaryl group present in a substituent group on  $Z^2$  is optionally further substituted by halo, cyano, nitro, hydroxy, caboxy,  $NR^{C6}R^{C7}$ , (1-2C)alkoxy, or (1-2C)alkyl; wherein  $R^{C6}$  and  $R^{C7}$  are selected from hydrogen or (1-2C)alkyl;

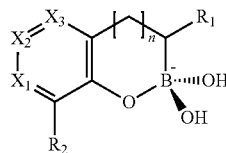
with the proviso that when n is O, Q is not absent or a pharmaceutically acceptable salt thereof.

2. A combination product according to claim 1, wherein the  $\beta$ -lactamase inhibitor is a compound of Formula I and Q is O.

3. A combination product according to claim 1, wherein the  $\beta$ -lactamase inhibitor is a compound of Formula I and  $X_4$  and  $X_5$  are carbon.

4. A combination product according to claim 1, wherein the  $\beta$ -lactamase inhibitor is a compound of Formula I and  $R_3$  is absent or a substituent group selected from halo, cyano, nitro, hydroxy, carboxy, amino, (1-4C)alkoxy, (1-4C)alkyl, (3-8C)cycloalkyl or (1-4C)alkanoyl.

5. A combination product according to claim 1, wherein the  $\beta$ -lactamase inhibitor is a compound of Formula Ib, shown below:



Formula Ib